

With kind regards.

CONGENITAL GOITRE.

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CONGENITAL GOITRE.

CONGENITAL GOITRE has been described and discussed of late years by various foreign writers, under the designation of *Struma Neonatorum* (*Kropf der Neugeborenen*, *Goître des nouveau-nés*), or, from one of its most prominent symptoms, *Asthma Thyroideum*. But, in English literature, except in a short article in the *Obstetric Memoirs* of Sir J. Y. Simpson,* and in another, still more brief, by Dr. Crichton,† of Chapel-en-le-Frith, Derbyshire, I have not met with any special notice of the affection; perhaps, from the circumstance that it more rarely comes under observation here than on the Continent. It may, therefore, not be uninteresting if I bring before this Society the history of a case which I recently witnessed, and state some of the points in connection with the disease which have been recorded by other observers.

CASE.

A lady, in excellent general health, had had two abortions at early periods, and a miscarriage at the seventh month. When she again fell in the family way, she was put upon chlorate of potash, which she continued to take regularly, three times a day, up till the time of her delivery, which took place at the full term. Labour was tedious throughout, but most markedly so during the second stage; for, although the passages were wide, flaccid, and dilatable, the anterior fontanelle came too easily within reach of the finger, and the head descended in a state of imperfect flexion.‡ I had great fear lest the perineum should give way during the passage of the head; but, except that the mucous membrane inside the vulva, at the

* Vol. II., p. 392; and *Edinburgh Monthly Medical Journal* for April, 1855, Vol. XX., p. 350.

† *Edinburgh Monthly Medical Journal* for August, 1856, p. 149.

‡ This has been pointed out specially by Sir J. Y. Simpson, who compares the effect of the tumour to that produced by the presence of the child's hand or arm in the neck.

posterior extremity of the right nympha, got torn on the prominent tuber parietale, there was nothing else noteworthy in the delivery. Immediately on the birth of the child, which was a male, when it was laid on its back I noticed that there was a swelling of some sort on the front of the neck, and delayed the ligaturing of the cord for a short space, as respiration seemed to be effected only with the greatest difficulty, and with strong convulsive movements of the muscles of the head and upper extremities. After the cord had been tied and divided, and the child handed over to the nurse, whilst I was attending to the labour in its third stage, I could hear the rough, hoarse, crackling sound of the laboured breathing, which gave an impression as if there was some fluid in the narrowed larynx. On examination, it was at once evident that the swelling, which projected to the level of the chin, and occupied nearly all the space between the chin and the sternum, was due to an enlargement of the thyroid gland. The isthmus could be felt passing in front of the trachea, and terminating in the two lateral lobes, all in their natural relation, and retaining their normal configuration; only all greatly increased in size, the right lobe slightly more hypertrophied than the left. Whilst being moved about, during the process of dressing, the infant had in some positions increased difficulty of breathing, more particularly when it was placed in somewhat of a sitting posture, so as to let the chin press upon the tumour; and, whenever it attempted to cry, the swelling became more prominent. For the first eight hours the quantity of fluid in the trachea continued undiminished, but the secretion then began to clear away, and, after twenty-four hours, there was no longer any crackling; although the hoarse, laboured breathing continued so loud for some days afterwards as to attract the notice of any one entering the room. Attempts at deglutition during the first twenty-four hours greatly aggravated the difficulty of respiration, but after that period both functions were performed with progressively increasing ease. During the first fortnight, whilst I had the child under frequent observation, there was no very marked change in the size of the swelling. There had been a certain degree of congestion at the date of birth which, during this period, had subsided, so as to leave the neck of somewhat diminished circumference; but the tumour remained firm, and by its protrusion attracted the attention of any one in whose arms the child was placed. But when, about four months afterwards, I again had an opportunity of seeing it, the tumour was diminished in size to about half its original bulk; and, as the infant had thriven extremely well, and grown very

fat and plump, he simply presented the appearance of having an extra layer of fat in the roll of flesh beneath his chin.

REMARKS.

Such being the history of this case, let me offer some remarks on the disease of which it forms a specimen, under the heads of its Pathological Anatomy, Etiology, Symptoms and Diagnosis, Prognosis, and Treatment.

I.—PATHOLOGICAL ANATOMY.

Of the various systems according to which it has been attempted to classify the different forms of goitre, or simple hypertrophy of the thyroid gland, probably the best is that which groups them into three orders, according as the enlargement affects its three structural elements, viz., the glandular substance, the blood-vessels, or the fibrous stroma. This is the classification adopted by Dr. Eulenberg,* of Coblentz, who has had many opportunities of enquiring into the nature of the disease, and who designates the three forms as 1, *Struma Glandulosa*; 2, *Struma Vasculosa*; 3, *Struma Fibrosa*; and, as all the cases of congenital goitre of which we have an anatomical description can be ranged in one or other of these divisions, I follow in this short sketch his classification.

1. *Struma glandulosa* (str. lymphatica of some authors).—Congenital goitres, with but few exceptions, all belong to this class. Eulenberg, indeed, would confine them to one of its varieties which he designates *struma glandulosa parenchymatosa*, in which the surface of the thyroid is uneven, nodous projections alternating with softer surfaces, and in which “we find on section an irregular conformation of the parenchyma, some parts being hard and some soft; the cut surface has a pale, dirty yellow and exsanguious appearance; the softened parts show a tendency to disintegration. The acini may be of normal size, reduced, or enlarged, but their contour is always determined with difficulty; the peculiar arrangement of the disintegrated cells and of the free granules in the form of an acinus alone determines the outline.” But, though some of the cases may fall under this description, assuredly others of the intra-uterine goitres, such, *e.g.* as that figured by Albers,† belong rather to the group which he describes as the *struma glandulosa hyper-*

* Pathological researches regarding the thyroid gland. See *British and Foreign Medico-Chirurgical Review*. Vol. xxvi., p. 540.

† *Atlas der Pathologischen Anatomie*. Tab. xxv., fig. viii.

trophica. "This is characterized" according to Eulenberg, "by a uniform enlargement of the thyroid, without any prominence or nodes; the right lobe is usually more affected than the left. A section shows the acini to be uniformly and largely developed; the surface of the section looks uniformly granular, and generally very red and vascular. This variety consists in a dilatation of the pre-existing acini, and in a new growth of acini." Sometimes the gland is equally enlarged throughout, so as to retain somewhat of its normal configuration. In other cases the isthmus is chiefly affected. More frequently the two lobes are specially implicated, and may meet in front with almost no isthmus between, in which case they are apt to pass in behind the trachea at the same time so as to encircle it, and in some instances both trachea and œsophagus have been caught in its fatal embrace. In the rarest form only one of the lobes is enlarged, and if it then grows downwards among the structures of the neck, the nature of the case may not be easily recognised. Occasionally there are found to be one* or more† small additional goitres, or supplementary portions of the thyroïdal structure lying in apposition with the main mass of the tumour, or separated from it and extending forward under the tongue.

There is another variety of this class of goitres characterized by the development of cysts of much larger size, filled with contents of a more fluid description. These cysts seem to be due sometimes to the enlargement of a single acinus; but in other cases, more particularly where they have attained unusual dimensions, their size results from the destruction of the inter-ocular dissepiments and the fusion of several small cysts into one large cavity. Of this struma glandulosa cystica, or cystic bronchocele, although it is extremely common in the adult, I find reference to only one congenital case.‡

2. *Struma vasculosa*. We have but very few cases on record of this form of congenital goitre, probably from the circumstance of its being of a more transitory character. Bach§ describes the appearances seen in a case where the foetus was born dead, in consequence of delivery being too long delayed, and terminated at last by the aid of the forceps. "The thyroid gland had a deep brown appearance; it was more glistening and more elastic than usual, and had almost the consistence of a placenta

* Sir J. Y. Simpson's case.

† Albers—*Erläuterungen zu dem Atlasse der Pathologischen Anatomie*, S. 308. Bonn, 1832.

‡ Hennig—*Lehrbuch der Krankheiten des Kindes*. S. 206. Leipzig 1855.

§ *Memoires de l'Academie de Médecine*. T. xix., p. 347. 1855.

which is removed when a cord is tied before being cut. The thyroid arteries and veins were gorged with blood. On incision of the tumour there flowed out a quantity of blood; it resembled, up to a certain point, a piece of hepatised lung, or rather the pathological condition which Laënnec describes in speaking of pulmonary apoplexy. A section of this gland was submitted to microscopic examination before being macerated, but it was impossible to trace the glandular elements. After a maceration of two days, the blood had almost disappeared, and all the constituent parts of the gland could then be traced. A certain quantity of blood, however, remained in the vascular canals." Although occurring only with comparative rarity as a separate affection, we not infrequently see this vascular variety—at least in its stage of excessive congestion, complicating the more common form of congenital goitre. Such, I doubt not, was the case with the infant whose history I have narrated; and such was shown by *post-mortem* examination to have occurred in a fatal case related by Dr. Maurer,* who found both lobes enlarged and of a brown red colour, and the veins passing down from the gland greatly swollen, some of the vessels being distended with dark blood to the thickness of a goose quill.

3. *Struma fibrosa*—characterized by a hard and commonly uniform tumour, ordinarily occupies only one lobe of the thyroid body, and has not, so far as I am aware, been met with as a congenital affection.

II.—ETIOLOGY.

Without entering on the wide and much-debated question, as to the cause or causes of the prevalence of goitre in certain districts, I remark, *first*, that, in the writings of those who are treating of the *endemic* relations of the disease, there is occasional reference to its occurrence in the congenital form. Foderè† was furnished with several examples by the clergymen of the different Swiss valleys which he visited, and had himself an opportunity of seeing three. In Strasburg, where the disease is endemic, Professor Tourdes‡ found at one time that, in the Maternité and the Crèches, out of thirty-one infants there were three with congenital hypertrophy of the thyroid gland. In a report§ on the health of the popul-

* *Journal für Kinderkrankheiten*. Band xxii., S. 357. 1854.

† *Traité du Goître et du Cretinisme*, 1808, p. 68.

‡ *Gazette de Strasbourg*, 7. 1854. *Schmidt's Jahrbücher* 85, 1855, S. 225.

§ *Schmidt's Jahrbücher*, 94, 1857, S. 368.

ation of the Russian empire, during the year 1855, it is noted that, in Kirensk, a district where goitre prevails, the disease is sometimes met with in new-born infants, and occasionally causes death by suffocation. Bach's* observations lead him, with P. Frank, Bauer, and Rappe, to believe congenital goitre to be very frequent in countries where it is endemic; and the same remark has been made by some of our own countrymen who have had opportunity of studying the disease in the goitrous districts on the sides of the Himalayas. Thus, Mr. Bramley, in an essay on the Bronchocele of Nipâl,† says: "No period of life is exempt from the disease. Children are sometimes born with it, as are also animals. Several instances of the latter occurred during my residence at Nipâl; on one occasion a goat brought forth a kid with a goitre as large as its head."

Then, *secondly*, some of these authors speak of congenital goitre, as occurring not only endemically, but as if, at the same time, it were always *hereditary*. And Betz, after relating the history of a fatal case,‡ adds "the mother had likewise a considerable struma lymphatica (goitre), which was always the case wherever I have met with goitre in new-born children." In his more complete essay on the subject,|| he tells of a family in which a mother, who was herself affected with goitre, gave birth to two infants who died in succession of the congenital disease. That it is largely due to hereditary constitution, there can, therefore, be no reasonable doubt.

But, *thirdly*, in some instances it is quite impossible to trace any influence either of a hereditary or endemic nature. In the case which I have here recorded, both parents were healthy and perfectly free from any trace of thyroid enlargement; and the infant presented the only instance of the disease which I have yet witnessed in this locality. In Dr. Keiller's case,¶ the mother of the child was born and brought up in the county of Cumberland, where goitre is not uncommon; but, although she had been affected to a slight degree at the time when she began to menstruate, it had soon passed away and left no trace. This was her first child, and she has since borne two others, who showed no trace of thyroidal disease. In Sir J. Y. Simpson's case it was equally impossible to trace any endemic or hereditary influence. In this case, as in mine, however, I remark that

* *Loco cit.*, p. 373.

† *Transactions of the Medical and Physical Society of Calcutta*, Vol. VI., p. 195, 1833.

‡ *Journal für Kinderkrankheiten*, Band xxv., S. 125, 1855.

|| *Henle und Pfeuffer's Zeitschrift für rationelle Medicine*, Band ix. (*erste Reihe*), S. 236, 1850.

¶ *Edinburgh Monthly Journal of Medical Science*, April 1855, p. 350.

the mother of the goitrous infant had been taking chlorate of potash throughout her pregnancy; not that there is any probable relationship of cause and effect between the use of the medicine in the parent and the production of the disease in the child—for many infants have been born under the same conditions in whom the gland appeared perfectly normal—but, because every individual fact in connection with a form of disease so rarely observable among us seems to be worthy of note.

Sex, as is well known, exerts a remarkable influence in the proclivity to disease of the thyroid, in individuals who are approaching the age of puberty. This comes out very clearly, *e.g.*, in the report of the children's hospital at Dresden by Dr. Küttner,* who shows that out of the whole number of goitrous children under fifteen years of age, three-fourths were girls. Up till the eighth year of age the number of boys and girls is nearly equal (15 b., 17 g.), but from that date onwards the proportion changes, so that in the aggregate there are nearly four times as many girls as boys affected with the disease between the ages of eight and fifteen. The cases of intra-uterine goitre in which the sex has been noted, are too few to draw any definite conclusion from them; but, so far as they go, they show that, as in the case of children under eight years of age, sex does not materially influence the liability to the disease. For, out of ten cases tabulated below, six of the infants were males, and four females. It is to be remarked that in the excessive development of the thyroid gland in girls at puberty, we see simply morbid exaggeration of a physiological phenomenon; and perhaps we might be able to trace out a parallel history in the development of intra-uterine goitre if we had a more perfect history of the normal development of the gland. It would be interesting in this way to ascertain some of the congenital goitres to represent merely a permanence, perhaps in an exaggerated degree, of a condition that is perfectly normal in the intra-uterine foetus; and this, I am inclined to think, is probably the true history of the disease in the more transitory cases. The thyroid gland, instead of presenting the size which is usually seen in the perfectly developed infant, retains the relative size proper to it in an earlier stage of growth; and, as the circulation in the neck is greatly interfered with by the flexion of the head during its transit through the maternal passages, the gland becomes the subject of such a degree of turgescence as to give it a truly goitrous character. We should require to be more fully acquainted, however, with

* *Journal für Kinderkrankheiten*. Bd. xxv. S. 3. 1855.

the normal course of development of this body before dogmatizing on its pathological degenerations; for, whilst it is somewhat vaguely stated (Bach) that it attains its largest size as the period of birth approaches, we know that in a foetus, about the eighth month, a goitre may already be developed of such a size as to cause great deformity, (Mondini) or, if the child be born alive, to cause its death within a few hours after delivery (Sir J. Y. Simpson).

III.—PROGNOSIS.

The enlargement of the thyroid gland, which, in the adult, is simply an object of dislike from its deformity, becomes in the new-born infant an object of dread from its fatality. The high degree of its mortality will be at once evident from a reference to the subjoined

TABLE OF CASES OF CONGENITAL GOITRE, SHOWING THE PROPORTION OF DEATHS AND RECOVERIES.

| REPORTERS. | NO. OF CASES. | SEX. | | DEATHS. | RECOVERIES. |
|--|---------------|-------|---------|---------|-------------|
| | | MALE. | FEMALE. | | |
| Albers, (<i>a</i>) . . . | 1 | ... | ... | 1 | ... |
| Bach, (<i>a</i>) . . . | 3 | 2 | ... | 1 | 2 |
| Betz, (<i>a</i>) . . . | 3 | ... | 3 | 3 | ... |
| Crichton, (<i>a</i>) . . . | 3 | ... | ... | 2 | 1 |
| Ferrus, (<i>b</i>) . . . | 1 | ... | ... | 1 | ... |
| Fröbelius, (<i>c</i>) . . . | 1 | 1 | ... | 1 | ... |
| Hedenus, (<i>d</i>) . . . | 1 | ... | ... | 1 | ... |
| Keiller, (<i>a</i>) . . . | 1 | 1 | ... | ... | 1 |
| Küttner, (<i>e</i>) . . . | 1 | ... | 1 | ... | 1 |
| Maurer, (<i>a</i>) . . . | 1 | 1 | ... | 1 | ... |
| Simpson, A. R., (<i>f</i>) . . . | 1 | 1 | ... | ... | 1 |
| Simpson, Sir J. Y., (<i>a</i>) . . . | 1 | ... | ... | 1 | ... |
| Spiegelberg, (<i>g</i>). . . | 3 | ... | ... | 2 | 1 |
| Weber, (<i>h</i>) . . . | 1 | ... | ... | 1 | ... |
| | 22 | 6 | 4 | 15 | 7 |

Such a table will not, of course, afford us an absolutely correct idea of the relative proportion of cases in which congenital goitre proves fatal to the subjects of it: for, in countries

(*a*) *Loco citato*.

(*b*) *Dictionnaire de Medicine*. Tome x., p. 283. Paris, 1824.

(*c*) *Petersburger Med. Zeitschrift*, 1865. II., 175 and *Centralblatt für die Medicinische Wissenschaften*, 1866. IV. 128.

(*d*) *Hasse's Pathological Anatomy*. (Sydenham Soc.) p. 386.

(*e*) *Journal für Kinderkrankheiten*, 1865. XXV., 2.

(*f*) Page 3.

(*g*) *Würzburger Med. Ztschr.* V. 160; and *Centralblatt f. d. Med. Wis.*, 1864. II., 894.

(*h*) *Beiträge zur Pathologischen Anatomie der Neugeborenen*. Simpson's obstetric works.

where thyroid disease is endemic, many infants may be born with goitres which are of so trifling a nature as not to come under medical observation at all. But it shows at the same time clearly enough that the congenital affection may prove highly formidable; and it becomes, therefore, a matter of some moment to inquire

What are the causes of the fatality of this disease? When the thyroid gland begins to take on a morbid degree of development, at the age of puberty or at any more advanced period of life, its growth, at least in the mass of cases that ultimately prove fatal, is extremely slow, and the cartilages of the larynx and trachea have already become sufficiently consolidated to fortify the rigid tube against the immediate effects of pressure. But in the foetus in utero the enlarging gland finds no such resistance from the tender walls of the air-tube; and as the functions of that organ are not called into play during intra-uterine existence its caliber may be encroached upon to any extent without the least danger to foetal life. The instant, however, that the foetus is detached from the mother, and compelled to respire by the lungs instead of the placenta, the hitherto innocuous tumour presents a fatal barrier to the accomplishment of the earliest function of its independent existence. Respiration can only be imperfectly effected through the compressed trachea, and every convulsive movement of the infant only augments the difficulty, by leading to increased congestion of the thyroid gland, and so to increased compression of the tube that lies in its embrace. I speak of its embrace, because, in a large proportion of the fatal cases, the tumour encircled, more or less completely, the trachea; and in some of the instances, the danger to life was rendered all the greater from the compression exerted at the same time on the oesophagus. In this way the infants, that escaped the immediate dangers of suffocation, became exposed to further risk from the impediments offered to the function of deglutition (Albers). The degree of danger is not always commensurate with the size of the growth, for a tolerably large goitre may cause but little difficulty of respiration if it be confined to the isthmus (Betz); while a tumour so small as almost to escape the observation of the physician, may become the cause of death (Bach). Betz* avers, I may add, that the point where respiration gets impeded is not the larynx nor the upper part of the trachea, but the entrance into the laryngeal cavity which becomes narrowed by the projection of the thyroid into the mouth: while Bednar† attri-

* *Journal für Kinderkrankheiten.* Bd. xxi. S. 162.

† *Lehrbuch der Kinderkrankheiten.* S. 290. 1856.

butes the obstruction to paralysis of the muscles that dilate the rima glottidis. But, whatever be the explanation, this much is certain, that some infants, born with goitre, die immediately from the impossibility of respiration; others perish within a quarter of an hour or an hour after birth from the imperfect fulfilment of the function; and even when they have breathed somewhat more fully, and have survived for four, eight, or thirty-six hours, or even for three (Spiegelberg) or four days (Betz), they have eventually died in consequence of the impeded respiration. In the non-fatal cases, the congestion, which seems to exist to a greater or less degree in all at the moment of birth, begins gradually to subside as respiration becomes established, so that after a few days the tumour is sensibly diminished in size, and, in those cases where the enlargement depends on an excessive turgescence of the vessels alone, the tumour may during that period have entirely disappeared. Even where there has been some glandular hypertrophy as well, the gland in most instances becomes diminished in six or eight weeks to its normal dimensions. In some cases, however, absorption does not set in till a later period. Thus Bach tells of one in which the tumour, two months after birth, remained to all appearance unchanged: the infant had a habitually impeded respiration, slightly blowing in character, and becoming stertorous when he cried. I had an opportunity lately of examining Dr. Keiller's former patient, who is now upwards of 11 years of age, and in whom no one, without having attention specially directed to it, would notice anything peculiar. He has, however, a slender, lady-like neck, and, when he throws back the head between the shoulders, an abnormal projection of the thyroid becomes apparent, and to the touch the body still feels somewhat larger than it ought to be.

IV.—SYMPTOMS AND DIAGNOSIS.

Before labour sets in there is no symptom that could lead us to suspect an enlargement of the foetal thyroid gland; but the moment a goitrous infant is expelled from the maternal passages, the existence of the tumour is manifested.

1. *Swelling of the Neck*.—A rounded swelling of variable thickness is seen running across the windpipe, and filling up more or less completely the space between the chin and sternum. In the least-developed cases it gives an appearance as if it were a double chin, of which the lower fold had rolled a little way down the neck; and from this it may give rise to varying degrees of deformity, according to the increase of its size, and

the extent to which one or other of the lobes becomes specially affected. Perhaps the greatest degree of deformity was produced in the case of an eight months' foetus, which had been alive to a very short time before its birth, and was born with a bronchocele, regarding which Professor Mondini* records that, "Commencing above at the margin of the lower eyelid, and hideously pushing up the nose and the mouth, it extended laterally, and, protruding the lips, descended of an enormous size down to the lower apex of the sternum, constantly tending more to the left than to the right."

2. *Impeded Respiration*,—Even in the cases where the enlargement of the thyroid is least indicated by its superficial prominence, the peculiar character of the respiration speedily betokens the presence of the abnormality. Sometimes, as I have said, the function is so utterly in abeyance that the infant perishes at once. Or, if air does reach the lungs, it is only at the expense of violent inspiratory efforts, during which the facial muscles, as well as those of the extremities, are thrown into convulsive action; and the air passes in and out with a short, harsh, rushing sound, which may be audible a long way off. This impediment to breathing is such a constant attendant on enlargement of the thyroid body, that, as I have already stated, it is often the first phenomenon that strikes the observer: and hence, as in treating of disease of the thymus gland, writers have spoken of thymic asthma; so, here, the disease in question has sometimes been denominated simply thyroid asthma. This harshness and difficulty of breathing never altogether intermits, though, during sleep, it may remit to a certain extent. Another point of interest in connection with the breathing, is, that there is always a crackling or gurgling sound superadded to that from the rush of air through the constricted canal. In many children at birth a rattle in the throat gives evidence that some viscid fluid has become lodged in the cavity of the larynx, and in a few minutes it has all cleared away. But, in the goitrous infant, the imbibed fluid has not had time to pass off ere its place is taken up by a fresh, frothy secretion, which renders respiration still more difficult, and which comes to form of itself almost a distinctive feature of the disease. This foam sometimes fills the mouth and escapes at the angles (Bach, Betz); and is supposed by Bach to be due to the pressure exerted on the pneumogastric by the hypertrophied gland, because of its resemblance to the excessive bronchial secretion that is seen in animals which have been subjected to section of that nerve. It seems to contribute in no incon-

* *British and Foreign Medical Journal*, Vol. xii., p. 229, 1841.

siderable degree, as I should have before remarked, to the fatal issue of the malady, from its accumulation at the glottis (Bach), or in the trachea below the point of constriction (Maurer). But in addition to the interference with respiration, there has also occasionally been noticed a marked degree of

3. *Difficulty of Deglutition*.—This is not by any means such a constant and formidable symptom as the interference with respiration: yet in some cases the power of suction is altogether destroyed, and when fluid is introduced into the mouth of the child, the imperfect attempts to swallow it greatly aggravate the respiratory troubles. Deglutition becomes utterly impossible in those cases where the two horns of the enlarged thyroid pass round behind the œsophagus and meet together between that tube and the spinal column; and if in such a case the infant were to survive the impediment to respiration, it must infallibly die of inanition. Such a condition of matters is rare enough, but, even in the simpler cases it is worthy of remark, that it is only after repeated attempts at swallowing the milk passes the point of constriction.

Of the cyanotic colour and coldness of the hands, feet, and lips, and the anxious expression of countenance, I do not speak particularly, because those and other similar symptoms will at once suggest themselves to the mind as being necessarily associated with the imperfect fulfilment of the respiratory function. Nor do I now detain you with a discussion as to the differential diagnosis of the fatty tumours, ranulæ, hygromata,* enlargements of the lymphatic glands, abscesses, or other swellings of the neck with which goitre may be confounded; but remark merely that, having in view the special symptoms which I have just described, a short examination of the tumour, in almost any case that may come before us, will be sufficient to establish a correct diagnosis. The skin over the growth is of normal colour, and moves freely over it; the tumour is felt exactly in the site of the thyroid gland, and, even when it grows more towards one or other side it can always be traced back to its primitive relationship, and can be felt moving more or less distinctly in accordance with the movements of the larynx.

V.—TREATMENT.

There might be much room for discussion as to the treatment of bronchocele in the adult, but with regard to the treatment of the congenital affection I fear there is not much to be

* Storch. *Ueber das Angeborene Hygrom des Halses*, in the *Journal f. Kinderkrankheiten*. Band xxxvii., S. 68. 1861.

said. Where respiration is at all possible, it will certainly be facilitated to some degree by extending the head, and so putting the infant in a more favourable position for breathing than when the chin is allowed to press on the tumour. In the non-fatal cases iodine has been administered and applied in various forms and combinations internally and externally; but it may be questioned how far its use has contributed to the cure, and it admits of no doubt that in some instances the goitre has entirely disappeared where the remedy had never been employed at all. In the more alarming cases, leeches have been applied with the view of relieving the congestion, emetics have been given because they are useful in other respiratory troubles, and a tube has been passed through the narrowed canal so as to permit the entrance of air to the lung. But none of these measures have served to avert, or even greatly to retard the fatal issue. In short, the sum of all our observations in regard to the treatment of congenital goitre amounts pretty nearly to this—that in the desperate cases we *can* do nothing, and in the milder instances nothing *needs* to be done.

